Post-Approval Field Review Report

Shwe Taung Group (STG) Cement Project

International Finance Corporation (IFC)

Country: Myanmar
Risk category: A (high risk)
Total project cost: $110m
IFC investments: $15m equity investment and an A loan up to $20m
IFC board date: July 31, 2017
Site visit: December 1-15, 2018
Public disclosure of report: May 2019

This report was prepared by Chad Dear Ph.D., USAID, Alexandra Swanson Ph.D., Department of State; William Gibson Ph.D., USAID; and Mark Childerhose, USAID.

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List of Acronyms

BAP	Biodiversity Action Plan
BOMP	Biodiversity Offset Management Plan
ESAP	Environmental and Social Action Plan
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
ESRS	Environmental and Social Review Summary
GoM	Government of Myanmar
IFC	International Finance Corporation
IFI	International Financial Institutions
MDB	Multilateral Development Bank
NGO	Non-Governmental Organization
PS	Performance Standard
STC	Shwe Taung Cement
STG	Shwe Taung Group
USAID	United States Agency for International Development
USG	U.S. Government

Executive Summary

Consistent with Title XIII of the International Financial Institutions Act and Public Law No.113-235, the purpose of this review is to: 1) assess the adequacy of safeguard implementation; 2) evaluate the incorporation and effectiveness of previous U.S. Government recommendations; and 3) provide additional recommendations to support the environmental and social performance of the Shwe Taung Group (STG) Cement Project. Project lenders include the International Finance Corporation (IFC).

The review was informed by desk and field research, including a literature review, more than 50 interviews with project stakeholders and experts, and observations in and around the project areas. The field review team triangulated methods as much as was practical.

The STG Cement Project is expanding existing facilities to approximately triple production capacity. The project is expanding a cement plant, mudstone quarry and limestone quarry located in Thazi Township of the Mandalay Region of Myanmar. The cement plant is receiving coal from an existing coal mine—an associated facility—located in the Kalaywa Township of the Sagaing Region. The project is also supporting improvements to and construction of an access road to the coal mine. Total project cost is approximately $110 million. IFC's investment includes a $15 million equity investment and an A loan of up to $20 million to STG. IFC is also providing support to mobilize up to $40 million in additional debt and equity for the company.

The scope of this field review is the development and implementation of the project's Biodiversity Action Plan and other project-level plans, assessments and reports relevant to environmental and social dimensions of the use of biodiversity offsets for impacts on critical habitat.

The project was approved by the World Bank Group Board of Executive Directors on July 31, 2017, despite a "no" vote by the United States. A primary U.S. concern was the use of biodiversity offsets for impacts to critical habitat. This concern was consistent with previous comments from the United States regarding IFC and World Bank policy related to biodiversity offsets.

Findings and Recommendations

Finding 1: With financial and technical assistance from IFC, STG is enhancing a formal management system for meeting its environmental, social, health and safety commitments and achieving safeguard objectives, including those described in the Biodiversity Action Plan.

Finding 2: Potential adverse impacts to natural and critical habitat were clearly identified and actions to minimize and mitigate these impacts are included in project documents. Less clear, however, are efforts to avoid these impacts, including through analyses of alternatives for achieving project objectives.

Recommendation:

a. The project should formally analyze alternatives to using coal and/or relying on coal from sources adversely affecting natural and critical habitat and, if viable, support STG's transition away from the Kalaywa Township coal mine. The project should disclose this and any previous analysis of alternatives that contributed to project siting and design.

Finding 3: Gaps in baseline data will impede the project's ability to monitor success of project-site mitigation measures, to calculate offset parameters that will ensure ecological equivalency, and to measure net gain for critical species. This finding does not apply to the project's detailed assessment of affected karst habitat.

Recommendations:

a. The project should prioritize obtaining the most accurate baseline data available, such as through permanent camera-trapping, visual transect, and listening surveys to establish population baselines at both project and offset sites with project site monitoring being an immediate priority.
b. Should further surveys reveal additional species present at the project sites, the project should confirm presence of the newly documented species in the offset sites so that monitoring of the conservation additionality can be measured accurately. If the newly identified species are not present in the offset sites, the project should take appropriate conservation actions.

Finding 4: Potential significant cumulative impacts have not been thoroughly identified or accounted for in project planning and may create long-term challenges to the biodiversity net-gain and no-net-loss requirements. Among other challenges, cumulative impacts and a lack of landscape-scale planning may limit the contribution of the Mahamyaing Reserve to biodiversity conservation and thereby compromise the ability of the Government of Myanmar (GoM) to achieve its goal of doubling the tiger population.

Recommendations:

a. IFC and STG should encourage and collaborate with appropriate GoM ministries and departments to monitor existing and future development in the forest landscape around the project and biodiversity offset sites, especially around Mahamyaing Sanctuary, and to identify opportunities for and threats to connectivity of intact forest habitats.
b. IFC and GoM should consider landscape-level habitat connectivity when approving future extractive projects in this landscape.
c. If additional financing for conservation becomes available, IFC and GoM should support genetic analyses and literature review to assess minimum sizes of sustainably viable populations, especially when isolated.

Finding 5: People living in and around the biodiversity offsets, including legally-recognized ethnic minority groups, may be adversely affected by restrictions on land use or access to natural resources from biodiversity offset conservation measures. Information gaps on potential social and economic impacts resulting from limited stakeholder engagement, baseline and risk assessment, and mitigation cost estimation will likely hinder the success of biodiversity offset plans.

Recommendations:

a. The project should collaborate with the Forest Department and/or other GoM agencies to supplement ongoing social and economic assessments that are relevant to this project area; ensure the assessments meet the requirements of all relevant IFC Performance Standards; and include people potentially affected by the biodiversity offsets. Results from the assessments should be used to accurately target and budget for conservation and livelihood restoration activities.
b. The project should establish a participatory process for determining appropriate restrictions on land use in the biodiversity offsets and estimate costs for mitigating adverse impacts to livelihoods from biodiversity-offset restrictions. Publicly disclose English and local language translations of a biodiversity offset-related stakeholder engagement plan as part of the larger project stakeholder engagement plan.
c. IFC should proactively reinforce to GoM that any physical or economic displacement of people in the biodiversity offsets must be conducted in a manner consistent with IFC Performance Standards, even if such displacement is induced by non-project-related GoM actions (e.g., implementation of the Vacant, Fallow, and Virgin Lands Act).
d. The project should expand the planned follow-up analyses of the applicability of IFC's Performance Standard on Indigenous Peoples to include people adversely affected by the biodiversity offsets. It should also publicly disclose the complete set of analyses.
e. The project should employ a social specialist with regional expertise to conduct the above activities. If economic and/or physical displacement risks are potentially significant, employ a resettlement specialist with regional expertise. IFC should closely monitor the work of these specialists.
f. The project should modify the Biodiversity Offset Management Plan to include the above-recommended actions, including appropriate supplemental financial resources. The scope of work for the NGO service provider should enable the latitude required to assess and address social and other emergent challenges.

Finding 6: Achieving the additional conservation outcomes required of the biodiversity offsets is dependent on STG, GoM and partner commitments to coordinate roles, responsibilities, and financial resources; however, these roles, responsibilities, and financial resources are not yet formally defined.

Recommendations:

a. The project should assess and document the likely trajectory of biodiversity conservation both with, and without, the measures planned for the offsets in order to

establish a without-offset baseline against which additional conservation outcomes can be measured. Urge GoM to strive to meet best regional practice conservation efforts on estimations of budgetary and human resources. India and Thailand, for example, have considerable experience in this area.

b. Current and planned roles, responsibilities, and committed financial resources of STG, GoM, and conservation actors documented in the without-offset baseline assessment should inform negotiations regarding a legally-binding and long-term agreement between STG and GoM.

Introduction

USAID Legal Mandate

Title XIII of the International Financial Institutions (IFI) Act directs the U.S. Government (USG) to support the environmental and social performance of each multilateral development bank (MDB) in which the USG is a shareholder: African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, and the World Bank Group.

Toward this end, the United States Agency for International Development (USAID) leads pre- and post-approval field reviews of selected MDB projects in consultation with the Departments of the Treasury and State and relevant U.S. federal agencies per Section 1303(a)(1) and (3) of Title XIII of the IFI Act and Public Law 113-235 Section 7060(c)(7)(E)(i).

USAID selects projects for review that are particularly likely to have significant adverse impacts on the environment, natural resources, public health or indigenous peoples. For post-approval field reviews, USAID also considers USG recommendations regarding environmental and social performance provided to the MDB prior to board approval of the project. The purpose of post-approval field reviews is to: 1) assess the adequacy of safeguard implementation; 2) evaluate the incorporation and effectiveness of previous USG recommendations; and 3) provide additional recommendations to support the environmental and social performance of the project. If not classified, the information collected during reviews is made available to the public.

Scope of Field Review

This post-approval field review is on the Shwe Taung Group (STG) Cement Project, Myanmar. In consultation with U.S. federal agencies, the USAID MDB Team selected the STG Cement Project to review based on concerns described in the United States position on the project[1] (summarized below; full version in Annex 1) and in numerous publicly disclosed United States comments and positions on IFC and World Bank safeguard policies[2] (summarized below; excerpts in Annex 2) regarding the use of biodiversity offsets for impacts to critical habitat. Project lenders include the International Finance Corporation (IFC), in which the USG is a shareholder.

The scope of this field review is the development and implementation of the project's Biodiversity Action Plan (BAP) and other project-level plans, assessments and reports relevant

[1] United States Position, IFC Proposed Financing of the STG Cement Project in Myanmar, July 31, 2017. https://www.treasury.gov/resource-center/international/development-banks/Documents/07-31-2017-STGCement-Project-Myanmar.pdf

[2] U.S. Department of the Treasury, Positions on Operational Policies of Multilateral Development Banks. https://www.treasury.gov/resource-center/international/development-banks/Pages/operational_policies.aspx

to environmental and social dimensions of the use of biodiversity offsets for impacts to critical habitat.[3] Findings and recommendations highlight good practice and areas for improvement.

Framework and Methods

USAID framed its analysis using relevant U.S. legislation, previous USG recommendations, IFC's Sustainability Framework and Guidance Notes, and the Business and Biodiversity Offset Program (BBOP) Standard and Guidelines.[4] Additional technical and academic publications were also used as resources for analysis.

Reviewers triangulated methods as much as was practical by using multiple data and information collection techniques, multiple sources, and multiple analysts. Reviewers used well-established purposeful sampling techniques including snowball, deviant case, and convenience sampling.[5] Sampling aimed to understand a diversity of stakeholder perspectives and to identify common themes. Reviewers verified information through multiple sources whenever possible. This approach enabled findings that highlight illustrative cases and not generalizations.

Data and information collection techniques included:

- Identification and review of project documents, IFC and other MDB policies, civil society organization reports, documents from related MDB and bilateral development projects, technical literature, and academic literature;
- Interviews with selected subject-matter experts;
- Semi-structured and open-ended interviews with interested and affected people and organizations (see next paragraph); and
- Biophysical and social observations in and around the project areas.

In the months before and the weeks during the December 2018 field visit, reviewers conducted more than 50 individual interviews and/or data-gathering meetings. Those interviewed included:

- IFC technical staff, including environmental and social safeguard specialists;
- STG staff, including senior management, technical staff and consultants;
- Representatives from relevant ministries of the Government of Myanmar (GoM) at national, regional/state and local levels;

[3] Relevant documents include baseline and other assessments that informed decision making regarding the biodiversity offsets.

[4] IFC Performance Standard 6 Guidance Note 32 states "A good biodiversity offset design should meet internationally-recognized practices, such as the Principles on Biodiversity Offsets developed by the Business and Biodiversity Offset Program (BBOP)."

[5] Purposeful sampling explores cases that fit particular criteria, using various methods. Snowball sampling explores cases using referrals from one or a few cases, then referrals from those cases, and so forth. Deviant case sampling explores cases that substantially differ from the dominant pattern. Convenience sampling explores any case in any manner that is convenient. Neuman, L.W. (2016) *Social Science Research Methods: Qualitative and Quantitative Approaches*. Seventh Edition. Pearson. Essex, England.

- Interested or affected organizations, such as international, national and local civil society organizations; and,
- Potentially project-affected people, such as residents, land and resource users, and leaders from communities in and around the proposed biodiversity offset areas in Mandalay Region, Shan State and Sagaing Region.

The December 2018 field review included visits to:

- The biodiversity offset sites which are largely the same as the Panlaung Pyadalin Cave Wildlife Sanctuary in Shan State and the proposed Mahamyaing Wildlife Sanctuary in Sagaing Region;
- Communities, agricultural lands and community forests in and around the biodiversity offset sites;
- The primary project location in Mandalay Region including the existing cement factory and limestone and mudstone quarries; and,
- The coal mine site, including supporting facilities and access roads in Sagaing Region, which serves as an associated facility to the cement factory.

Reviewers followed cultural norms in engaging local people and were sensitive to the team's influence on project-affected communities' perceptions of the project and its potential positive and negative impacts.

The field review team included USG technical specialists who provided subject-matter expertise relevant to this particular project. Team members included:

- Dr. Chad Dear, human dimensions of environmental management, USAID MDB Team (lead)
- Dr. William Gibson, ecology and environmental impact assessment, USAID Asia Bureau
- Dr. Alexandra Swanson, wildlife biology, U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs
- Mark Childerhose, project design, monitoring and evaluation, USAID Regional Development Mission Asia

Additional technical staff from multiple U.S. federal agencies with subject-matter expertise provided input on biodiversity offset design; species-specific conservation in Myanmar; governance, financing and institutional capacity for conservation management; social impacts of conservation; and MDB policy regarding biodiversity offsets.

This review was limited by its access to only publicly disclosed project documentation. The primary document under review, the Biodiversity Action Plan, was disclosed while the review team was in the field in early December 2018. The Stakeholder Engagement Plan was not yet disclosed at the time the review concluded. IFC and STG staff and consultants, however, were accessible and highly cooperative.

Background

Country context

Decades of civil conflict and military government have defined Myanmar's political, social and economic development since its independence from British rule. Myanmar is home to the world's longest-running civil conflict, lasting since its establishment as an independent country in 1948, when rebellions erupted across the country and numerous ethnic groups took up arms. Against this backdrop, Burma's military (the Tatmadaw) established itself as a self-proclaimed force of unity and governed the country for half a century. Given the complex and intertwined relationships between the military, civil government, and ethnic minorities, there has been little progress over those decades toward alleviating conflict or encouraging inclusivity. This legacy pervades the country's political and economic psychology.

Over 100 of the 330 townships in Myanmar are affected by long-term sub-national conflict, with parts of Myanmar completely under the control of ethnic armed organizations. The democratization process and peace negotiations have stalled due to ongoing national tensions over political structures and the role of the military in national and local governance. Ethnic conflict continues due to political grievances related to ethnic self-determination, representation, and equality. Such conflicts, including those related to natural resource access and control, are exacerbated by environmental degradation and rapid economic change and are likely to increase over time. Prolonged conflicts have impeded economic development and caused large-scale displacement of affected populations.

In addition, further violence in 2017 caused another approximately 700,000 refugees—primarily Rohingya—to flee Rakhine State, joining the already 120,000 from previous violence in 2012. The escalation of violence in Rakhine and resulting human rights abuses have severely hampered development efforts in the state due to donor restrictions, lack of access, and limited response from the Government of Myanmar.

In September 2018, a UN Fact-Finding Mission issued a call for the investigation and prosecution of Myanmar's top military leaders for genocide, crimes against humanity and war crimes.[6] The US has also sanctioned military leaders for ethnic cleansing and human rights abuses.[7] The situation in Rakhine pervades and is at least indirectly influencing development across the country including the military's and government's relationship with rural ethnic populations.

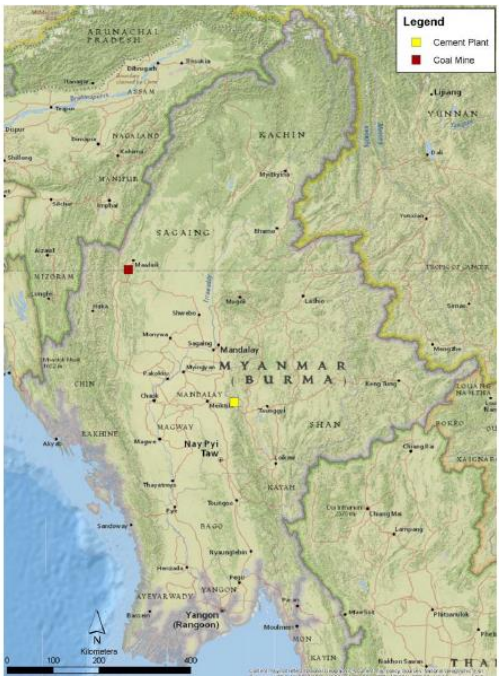
Project Background

[6] OHCHR. Report of the detailed findings of the Independent International Fact-Finding Mission on Myanmar - A/HRC/39/CRP.2 (Release date 18 September 2018).

[7] See US Department of the Treasury Press Release. August 17, 2018. https://home.treasury.gov/news/press-releases/sm460

The IFC STG Cement Project is supporting the expansion of existing Shwe Taung Cement (STC)[8] facilities in the Mandalay and Sagaing Regions of Myanmar. The project aims to roughly triple STC's clinker production capacity and cement capacity.[9] The project is expanding a cement plant, a mudstone quarry and a limestone quarry located in Thazi Township of Mandalay Region. The project is one of IFC's first investments in the manufacturing sector in Burma and the project should stimulate economic development in an under-developed part of the country, creating direct and indirect jobs, and rising the quality of the social and environmental standards. As a post-conflict, fragile country with many infrastructure needs, the project also will help provide the cement needed for many development projects and reduce the dependency on imported cement. The cement plant sources coal from an existing coal mine—an associated facility—located in the Kalaywa Township of the Sagaing Region. The project also supports improvements to, and potentially construction of, an access road to the coal mine.

Figure 1. Locations of Cement Plant (with associated Quarries) and Coal Mine (Adapted from IFC STG Project ESIA p. 7).



The total project cost is approximately $110 million. IFC's investment includes a $15 million equity investment and a loan of up to $20 million to STC. IFC is also providing support to mobilize up to $40 million in additional debt and equity for the company.

Environmental and Social Impact Assessment and Mitigation Planning

The cement plant and quarry concessions in Mandalay Region overlap the Northern Indochina Subtropical Forests ecoregion. The mine concession in Sagaing Region overlaps with the Mizoram-Manipur-Kachin Rainforests ecoregion. Both ecoregions form part of the Indo-Burma Biodiversity Hotspot.

The environmental and social impact assessment (ESIA), which was disclosed in April 2017[10] in advance of the July 2017 Board vote, describes various minimization and restoration efforts and

[8] STC is part of the Shwe Taung Group, one of the leading corporations in Myanmar which, aside from the cement operations, is involved in the supply of construction materials, real estate development, trading, retail and hospitality, and energy projects. STC is the holding company for the Group's cement plant, High Tech Concrete Co. Limited ("HTC"), and Shwe Taung Mining Limited ("STM").

[9] Clinker production capacity is expected to expand from 1,500 tons per day (tpd) to 5,500 tpd. Cement capacity is expected to expand from 2,800 tpd to 7,200 tpd.

[10] See: http://www.shwetaunggroup.com/wp-content/uploads/2017/04/Supplementary-ESIA-Report.pdf

notes that significant residual impacts are expected due to loss of natural and critical habitat for endangered and critically endangered plant and animal species in both project locations.[11] A Biodiversity Offset Strategy—based on resource documents from the Business and Biodiversity Offset Program (BBOP)[12]—was included in the April 2017 ESIA. The Strategy formed the basis for a Biodiversity Action Plan (BAP)[13] to deliver no net loss for natural habitats and net gain for critical habitat values. The BAP includes a detailed Biodiversity Offset Management Plan and a Biodiversity Monitoring and Evaluation Plan. The BAP was disclosed in December 2018, during the field review.

The BAP proposes to offset the identified residual impacts of the STG Cement Project through targeted conservation measures supporting the management of the previously gazetted Panlaung Pyadalin Cave Wildlife Sanctuary adjacent to the cement plant site,[14] a southern extension to the Panlaung Pyadalin Sanctuary proposed as part of the offset, and the GoM-proposed Mahamyaing Wildlife Sanctuary east and across the Chindwin River from the coal mine site in Sagaing Region.

Summary of U.S. Position on the IFC STG Cement Project, July 31, 2017

At the July 31, 2017 meeting of the World Bank Group Board of Executive Directors, the United States voted "no" on the proposed IFC STG Cement Project in Myanmar.

In the publicly disclosed position statement, the United States noted its strong support for IFC engagement in Myanmar and the important role IFC plays to catalyze private sector investment. The U.S. also noted that the STG Project is expected to offer both financial and development additionality. However, the statement went on to note that "...the United States has significant concerns about the environmental due diligence, which U.S. subject matter experts assessed especially carefully in light of the unique characteristics of the ecosystem where the STG cement plant and its limestone quarry and coal mine are located and the prevalence of wildlife trafficking and illegal logging in the area."

Specific United States concerns include:

- The ESIA report and supporting documents "revealed gaps in baseline data for rare and endangered species as well as insufficient analysis and mitigation plans to address environmental impacts."

[11] The cement plant and quarry concessions are critical habitat for; i) critically endangered and endangered species (2 mammals, 1 plant); ii) restricted range or endemic species (4 snails); iii) highly threatened and/or unique ecosystems (karst ecosystems); and iv) key evolutionary processes (karst ecosystems). The coal mine concession is critical habitat for critically endangered and endangered species (4 mammals, 4 plants)

[12] See BBOP website at http://bbop.forest-trends.org/

[13] See STG Cement Project Biodiversity Action Plan at:

[14] The cement plant site lies entirely within Mandalay Region. Although adjacent, the Panlaung Pyadalin Cave Wildlife Sanctuary is located in Shan State.

- "...the plans for addressing impacts to critical and natural habitats (e.g., the biodiversity action plan) should have been more robustly developed."
- "The risks associated with the use of offsets to mitigate impacts to critical habitat are high and require a commensurately high level of data quality, analysis, planning, and commitment. In light of capacity constraints, the project should have included designated financing and assistance to improve technical capacity and governance in the relevant government institutions. Absent this, the United States is not confident that the project ensures against a net loss, or ideally allows for net gains for biodiversity."
- "...the project should have included emissions data for the coal mine and additional air quality data, without which it will be impossible to effectively assess the project's impact."

The United States also reiterated its "support for the economic and political reforms in Myanmar, as well as its demonstrated commitment to environmentally sustainable development. The U.S. position on this project is a reflection of the importance it places on adequate data collection and project preparation in advance of presentation of proposals for IFC Board consideration in all countries. The U.S. commitment to Myanmar's development, both through bilateral assistance and engagement with multilateral resources like the IFC, remains steadfast."

Summary of Publicly Disclosed U.S. Comments and Positions on IFC and World Bank Policies regarding Biodiversity Offsets for Critical Habitat 2010-2016

During the most recent revision of IFC's Sustainability Framework and Performance Standards (2010-2011), the U.S. publicly disclosed three sets of comments and a U.S. position, all of which expressed concerns regarding biodiversity offsets and/or project impacts to critical habitat. The U.S. supported the revised IFC Sustainability Framework and included the following as part of the May 2011 U.S. Position statement:

> In Performance Standard 6 on biodiversity, the U.S. would have liked to see stronger protections for critical habitat and legally protected areas, a prohibition on offsets for impacts in critical habitat, and a broader scope with respect to ecosystem services. The U.S. is especially concerned about the risk of irreversible damage to critical habitat and urges the IFC to be on solid scientific ground before agreeing to any projects in or affecting critical habitat, and to use offsets for critical habitat only on a truly exceptional basis, if at all. The U.S. would appreciate Management's confirmation that, under this policy, offsets would be used only on an infrequent basis and would require the involvement of internationally recognized experts.[15]

Separately, the United States also submitted and publicly disclosed numerous comments on various drafts of the World Bank's Environmental and Social Framework, including

[15] See U.S. Department of the Treasury's Multilateral Development Bank website: https://home.treasury.gov/policy-issues/international/multilateral-development-banks

Environmental and Social Standard 6 (ESS6) on Biodiversity Conservation and Sustainable Management of Living Natural Resources. Excerpts of U.S. comments specific to biodiversity offsets made in the context of various safeguard reviews are in Annex 2. These comments and concerns form part of the justification for selecting the IFC STG Cement Project for review and for focusing the review on the use of biodiversity offsets for impacts to critical habitat.

Significance of STG Cement Project Biodiversity Offsets for Myanmar

There is some experience in Myanmar with compensation schemes for impacts to biodiversity.[16] However, the IFC STG Cement Project will be the first attempt to establish biodiversity offsets in line with MDB policy and international good practice standards, such as BBOP. STG's leadership in this pioneering effort will incur additional challenges and costs that subsequent companies and projects will not. The findings and recommendations described below aim to document and promote learning regarding these challenges to support the biodiversity offsets in this project as well as potential future offsets in Myanmar.

Findings and Recommendations

Finding 1: With financial and technical assistance from IFC, STG is enhancing a formal management system for meeting its environmental, social, health and safety commitments and achieving safeguard objectives, including those described in the Biodiversity Action Plan.

IFC is providing financial and technical support to STG to enhance the company's capacity regarding environmental and social management systems (ESMS), corporate governance, and gender policies and outcomes. IFC staff explained that, among other activities, technical assistance has included an ESMS assessment and improvement plan, two trainings on stakeholder engagement and grievance management, and one training on IFC Performance Standard 6 on Biodiversity Conservation and Sustainable Management of Living Natural Resources and BAP implementation.

Establishment of a formal ESMS for meeting commitments and achieving STG's BAP and other safeguard objectives is a positive development. Assuming STG continues to implement it, a formal ESMS should improve the company's environmental, social, health, and safety performance in the face of existing challenges and enable effective adaptation in the face of unanticipated ones. A functioning ESMS will increase the likelihood of successful environmental and social safeguard implementation and better biodiversity conservation outcomes. These improvements are likely to continue as STG improves business practices and increases prosperity.

[16] Pollard, E. H. B., Soe Win Hlaing & Pilgrim, J. D. (2014) Review of the Taninthayi Nature Reserve Project as a conservation model in Myanmar. Unpublished report of The Biodiversity Consultancy, Cambridge, England.

<u>Finding 2</u>: Potential adverse impacts to natural and critical habitat were clearly identified and actions to minimize and mitigate these impacts are included in project documents. Less clear, however, are efforts to avoid these impacts, including through analyses of alternatives for achieving project objectives.

The April 2017 ESIA and the December 2018 BAP provide evidence of impact assessments and a description of measures to reduce significant adverse impacts by means of minimization, rehabilitation, and/or restoration. These measures include implementation of a zero-tolerance policy against poaching for all STG staff and contractors; an anti-illegal logging policy to be implemented in coordination with local communities and GoM; commitments to respect the requirements of legally designated protected areas; reforestation programs and other activities to restore biodiversity values; and a commitment to assess and manage the values of nature for people at the project sites in coordination with local communities.

The April 2017 ESIA and December 2018 BAP do not, however, identify and analyze the impacts to natural and critical habitats of the range of reasonable alternatives for achieving the project objective of expanding clinker and cement production. Specifically, documentation describing alternatives to using coal and sourcing it from the mine in Kalaywa Township of Sagaing Region is missing.

It is interesting that the ESIA does not discuss alternatives, as STG senior management described at least four alternatives that they have been considering and that they continue to explore. These include burning municipal solid waste to fire its kilns; installing a solar farm; converting waste heat from the cement process to supplement electricity demand; and discontinuing coal mining from the Kalaywa Township site and using alternative coal sources. STG senior management noted that coal from the Kalaywa Township mine provides 40 to 50 percent of the kiln fuel.

IFC staff explained that an analysis of alternatives—not specific to biodiversity—was included in the set of ESIAs submitted to the GoM in 2014 through 2016. However, these ESIAs were not disclosed by the project as part of the more robust supplemental ESIA disclosed in April 2017. IFC staff explained that the project will disclose the full set of ESIAs once IFC provides final approval of all the documents. IFC staff further explained that the project's Environmental and Social Action Plan (ESAP) also requires specific actions related to alternatives, e.g., assessing alternative alignments for the new road to the coal mine.

Without publicly disclosed documentation dating prior to project approval, however, it is unclear the extent to which the project analyzed possibilities to avoid impacts to natural and critical habitat through alternative locations, designs, or operational processes. It is therefore difficult to determine the extent to which residual adverse impacts to natural and critical habitat could have been avoided.

The IFC STG Cement Project is largely a brownfield investment supporting expansion of existing facilities. IFC policy mandates alternatives analyses for greenfield developments "or large expansions with specifically identified physical elements, aspects, and facilities that are likely to generate potential significant environmental or social impacts."[17] Given the known impacts to natural and critical habitat and uncertainty of successfully implementing biodiversity offsets in Myanmar, the project should have thoroughly analyzed, formally documented, and publicly disclosed alternatives to inform project design, stakeholder engagement, and board decision making.

Recommendations:

a. The project should formally analyze alternatives to using coal and/or relying on coal from sources adversely affecting natural and critical habitat and, if viable, support STG's transition away from the Kalaywa Township coal mine. The project should disclose this and any previous analysis of alternatives that contributed to project siting and design.

<u>Finding 3</u>: Gaps in baseline data will impede the project's ability to monitor success of project-site mitigation measures, to calculate offset parameters that will ensure ecological equivalency, and to measure net gain for critical species. This finding does not apply to the project's detailed assessment of affected karst habitat.

A general challenge in data collection for this brownfield project is the simple fact that the landscape and project sites have been disturbed by STG activities for numerous years prior to IFC involvement. Data collection techniques at this point cannot recreate the original baseline from before STG's activities.

Nonetheless, baseline assessments for both the coal mining site and the non-karst habitat at the cement plant project area were not sufficient to determine current population sizes or the presence of rare and elusive species, and did not assess local or landscape-scale ecological processes. In particular, the camera trapping survey was not consistent with good practice standards.

Camera surveys used to produce a simple inventory of the species present typically run 1,000 to 2,000 camera trap days (i.e., number of sites multiplied by the number of days each site was operational), at a minimum.[18] In diverse ecological communities, this minimal search effort likely

[17] IFC PS1 paragraph 7 footnote 11.

[18] See: Ahumada J.A. et al. 2013. Monitoring the Status and Trends of Tropical Forest Terrestrial Vertebrate Communities from Camera Trap Data: A Tool for Conservation. *PLoS ONE* 8(9); Azlan, M.J. 2006. Mammal Diversity and Conservation in a Secondary Forest in Peninsular Malaysia. *Biodiversity and Conservation*. 15: 1013-1025. Silveriera et al 2003. Camera trap, line transect census and track surveys: a comparative evaluation. *Biological Conservation* 114. 351–355; Srbek-Araujo and Garcia 2005. Is camera-trapping an efficient method for surveying mammals in Neotropical forests? A case study in south-eastern Brazil. *Journal of Tropical Ecology*. 21(1). 121-125; Tobler, M.W. et al. 2008. An evaluation of camera traps for inventorying large- and medium-sized terrestrial rainforest mammals. *Animal Conservation*. 11. 169–178.

only captures 60 to 70 percent of fauna present.[19] For this project, camera trap surveys were conducted for 228 days at the coal mine site and were only conducted in the dry season. No camera trapping was conducted at the cement plant site.

Any method of obtaining data has its advantages and disadvantages and, as the ESIA notes, the camera trap surveys were unlikely to have produced a complete record of species present in the project areas. The baseline assessments therefore relied on interviews with villagers regarding presence of certain species. However, any species that might have been missed in the camera surveys are more likely to be rare and elusive, making them also less likely to have been identified via interviews with local people. Additionally, the camera trapping survey might have missed any species present or more active in the wet season.

IFC staff responded to the above critique by arguing that the approach of the project was consistent with international good practice for biodiversity offset design and monitoring. As IFC staff explained, the offsets were designed using habitat surrogate metrics, combined with consideration of priority species to confirm ecological equivalency. IFC staff further explained that given the lack of data in countries such as Myanmar, and that project impacts were not species specific, such an approach was considered adequate and a pragmatic baseline survey was designed to provide the key data required. According to IFC staff, the experts they consulted told them that the baseline information was adequate for designing a robust mitigation plan. Any rare or elusive species that could occur, IFC staff explained, were considered unlikely to materially change or add to the proposed mitigation or conservation actions. IFC staff acknowledged that further information is required to fully inform management and so ongoing on-site monitoring (e.g., camera trapping, direct observation transects) has been required as part of the BAP.

It may be possible, as IFC staff explained, that additional camera trapping and even identification of additional species may not alter design of the offsets or specific conservation actions. The lack of baseline population data, however, makes it difficult to monitor success of mitigation strategies, as there is no baseline to compare even relative populations through time. Failure to conclusively identify all endangered and critically endangered species potentially present and population sizes means the project may have underestimated the adverse impacts to biodiversity. Thus it may be difficult to calculate offset requirements to ensure no net loss or net gain. Without a complete survey of even species presence, it is also difficult to ensure ecological equivalency of the project areas and the biodiversity offset sites.

Given the use of habitat as a proxy and the proximity of the Panlaung Pyadalin biodiversity offset to the project area, it is unlikely that affected species are not captured in this offset.

[19] Rovero et al 2013. "Which camera trap type and how many do I need?" A review of camera features and study designs for a range of wildlife research applications. *Hystrix Italian Journal of Mammalogy*. 24(2):148–156

Nonetheless, project site and offset-level monitoring are important to ensure that threats of illegal hunting and logging are being mitigated. Risks of ecological non-equivalency are higher for the Mahamyaing offset, as the Chindwin River forms a physical barrier to dispersal from the project area. The baseline surveys identified that the western hoolock gibbon is not present in the Mahamyaing Sanctuary, likely due to the break in the canopy over the Chindwin River. Subsequently, the BAP proposes a process to create a specific offset for the western hoolock gibbon. Survey efforts were insufficient, however, to identify other potential species present in the project area that might be similarly bounded by the river and not captured in the offset.

It is important to establish a thorough population baseline to measure relative population changes through time to ensure the effectiveness of mitigation measures on the project site. Given continued threats of human encroachment and other activities in and around the protected areas, monitoring is also critical to measure success of the offsets to achieve the required no net loss and net gain conservation objectives.

Regarding karst habitat, the implementing NGO partner conducted a thorough baseline survey in and around the limestone quarry at the cement plant project area and at proposed biodiversity offset locations using snails as indicators for site endemism. Importantly, they sampled throughout the karst range beyond the project site, using quantitative data to identify the most appropriate location for a biodiversity offset, ensuring like-for-like or better.

Recommendations:

a. The project should prioritize obtaining the most accurate baseline data available, such as through permanent camera-trapping, visual transect, and listening surveys to establish population baselines at both project and offset sites with project site monitoring being an immediate priority.
b. Should further surveys reveal additional species present at the project sites, the project should confirm presence of the newly documented species in the offset sites so that monitoring of the conservation additionality can be measured accurately. If the species are not present, the project should take appropriate conservation actions.

<u>Finding 4</u>: Potential significant cumulative impacts have not been thoroughly identified or accounted for in project planning and may create long-term challenges to the biodiversity net-gain and no-net-loss requirements. Among other challenges, cumulative impacts and a lack of landscape-scale planning may limit the contribution of the Mahamyaing Reserve to biodiversity conservation for wide-ranging species.

Both project sites and biodiversity offset sites are in dynamic development landscapes. The STG coal mine is one of at least six near-by mining concessions along the western edge of the

Chindwin River. The mining companies share a road along the river that provides unrestricted access into the forest. While the road is largely unusable in the wet season and is rebuilt every year, future joint efforts by the mining companies could upgrade the road for year-round access. This could increase access for illegal activities such as hunting and logging.

Conservation experts told the field review team of additional extractive industries on the boundaries of the proposed Mahamyaing Reserve. There is also extensive human settlement within and on the edges of the proposed reserve, including recent major developments surrounding a newly established religious site immediately adjacent to the Mahamyaing Reserve.

The Panlaung Pyadalin Reserve is in a heavily settled landscape with human settlements around and within the reserve. Among other activities, there is extensive, unregulated, artisanal limestone mining, along with associated illegal logging to fuel local lime kilns to produce construction material.

In addition to raising concerns regarding stakeholder engagement (see Finding 4), these development activities could jeopardize habitat connectivity, isolate the biodiversity offsets from the larger landscape and reduce their conservation effectiveness. This could have particularly significant effects on wide-ranging species, including species that, through future conservation actions, could reinhabit the areas in and around the offsets. This review specifically evaluated potential implications for tigers in Myanmar to address concerns raised by USG and others prior to project approval.

Tigers are unlikely to be currently present in or immediately around the coal mining site. Interviews with hunters and others in local villages and consultations with conservation NGOs suggested that heavy development to the west of the Chindwin River resulted in exclusion or extirpation of tigers to the west of the river, leading to tigers being excluded from the scope of the ESIA which was disclosed in April 2017. It is important to note, however, that baseline monitoring was not sufficient to establish the presence or absence of tigers in the project area – camera survey efforts were approximately an order of magnitude below recommended minimum effort for tigers.[20]

Even though tigers are not likely present in the project site, the area could be important to their conservation. There are known tiger populations in Htamanthi Reserve approximately 300 km to the northeast. Unconfirmed reports of tigers from forest staff in the Mahamyang Reserve raise the possibility that tigers exist in the broader landscape. The coal mining site is

[20] According to the 2003 National Tiger Action Plan for Myanmar, Tigers were captured once every 3,000 camera-trap days in Myanmar, compared to every 200 camera days in Thailand. As explained in Finding 2, camera trap survey days at the coal mine site were limited to 228 days. See: Lynam, A. J. 2003. A National Tiger Action Plan for the Union of Myanmar. Report: 1-76. Myanmar Forest Department, Ministry of Forestry, Myanmar & Wildlife. Conservation Society, International Program.

within a much broader "global priority" Tiger Conservation Landscape identified in 2005.[21] The forest at both the project site and Mahamyaing Reserve support prey populations.

IFC PS 6 Guidance and BBOP Principle 3 state that biodiversity offsets should be designed to contribute to biodiversity conservation priorities identified at the landscape, eco-regional and national levels. Conservation action for both the project site and Mahamyaing should be considered as part of a larger landscape, with a view toward landscape-level connectivity. Such a landscape level approach is especially important given ongoing development and cumulative impacts in the region. More specifically, conservation action should consider Mahamyang and the project site as possible areas for future tiger populations.

Recommendations:

a. IFC and STG should encourage and collaborate with appropriate GoM ministries and departments to monitor existing and future development in the forest landscape around the project and biodiversity offset sites, especially around Mahamyaing Sanctuary, and to identify opportunities for and threats to connectivity of intact forest habitats.
b. IFC and GoM should consider landscape-level habitat connectivity when approving future extractive projects in this landscape.
c. If additional financing for conservation becomes available, IFC and GoM should support genetic analyses and literature review to assess minimum sizes of sustainably viable populations, especially when isolated.

<u>Finding 5</u>: People living in and around the biodiversity offsets, including legally-recognized ethnic minority groups, may be adversely affected by restrictions on land use or access to natural resources from biodiversity offset conservation measures. Information gaps on potential social and economic impacts resulting from limited stakeholder engagement, baseline and risk assessment, and mitigation cost estimation will likely hinder the success of biodiversity offset plans.

There are dozens of long-established and some recently established villages located adjacent to the biodiversity offsets and numerous villages and settlements located within or straddling the borders of the offsets. Residents include ethnic minority groups (defined as per Myanmar laws) and likely include groups of vulnerable people. The livelihoods of people in these communities are, to varying degrees, directly dependent on ecosystem services from the biodiversity offsets and adjacent lands.

[21] A global priority Tiger Conservation Landscape is defined as an "area where there is sufficient habitat for at least five tigers, and tigers have been confirmed to occur in the last ten years." Dinerstein, E., C. Loucks, A. Heydlauff, E. Wikramanayake, G. Bryja, J. Forrest, J. Ginsberg, S. Klenzendorf, P. Leimgruber, T. O'Brien, E. Sanderson, J. Seidensticker and M. Songer. 2006. Setting Priorities for the Conservation and Recovery of Wild Tigers: 2005–2015. A User's Guide. WWF, WCS, Smithsonian, and NFWF-STF, Washington, D.C. – New York.

The BAP includes brief descriptions of human residence and resource use and the Biodiversity Offset Management Plan (BOMP) includes management actions and stakeholder engagement with aims to identify and respond to threats and opportunities of resource use for conservation and to monitor community attitudinal change toward conservation. Implicit in the BAP and BOMP is that conservation success is dependent on changes to resource use and that such changes would likely include restrictions on land use or access to natural resources by resident communities beyond what they currently experience.

IFC PS5 Guidance on Land Acquisition and Involuntary Resettlement clearly states that impacts related to "restrictions on land use resulting from the creation of project-related…biodiversity offsets should be mitigated and compensated for according to the principles of the Performance Standard."[22] More broadly, the full set of IFC Performance Standards are potentially applicable to biodiversity offsets.[23]

Activities in the BOMP and conversations with project staff indicate that the responsibilities for identifying and addressing socio-economic issues related to the biodiversity offsets is intentionally being left to the NGO service provider that wins the bid to implement the biodiversity offset responsibilities of STG or to the Forest Department.

Among the implications of this approach is that issues related to land tenure, livelihoods, and indigenous peoples, and related stakeholder engagement did not inform an analysis of biodiversity offset alternatives and efforts to avoid offset-related socio-economic impacts through offset selection. Further, scoping related to these issues did not inform the scope of work or budget for the implementing NGO. Related budgetary limitations may undermine biodiversity efforts as insufficiently-resourced or unplanned social aspects of the offset plan may overcome additional biodiversity investments. Finally, existing and ongoing assessments and mitigation actions conducted by government have not been analyzed to determine gaps with IFC Performance Standards and plans to supplement such assessments have not been made.

Of particular concern, the legal rights and practical ability of residents to continue to reside and use resources in and around the biodiversity offsets is not assessed or even mentioned in the ESIA or BAP and there are no planned land tenure assessments in the BOMP. In addition to potential restrictions on land use from conservation measures, residents' security of land and resource rights are particularly vulnerable considering Myanmar's history of forcible and

[22] IFC, 2012b, Guidance Note 5, GN20. Also see discussion of the applicability of IFC PS1, PS5, and PS7 to biodiversity offsets in Bidaud, C., Schreckenberg K., and Jones, J.P.G., 2018. "The local costs of biodiversity offsets: Comparing standards, policy and practice. *Land Use Policy* 77, 43-50.

[23] Bull, J.W., Baker, J., Griffiths, V.F., Jones, J.P.G., and Milner-Gulland, E.J., 2018. Ensuring No Net Loss for people and biodiversity: good practice principles. Oxford, UK. DOI: 10.31235/osf.io/4ygh7.

uncompensated land confiscation[24] and recent efforts to implement the 2012 Vacant, Fallow, and Virgin Land Act.[25]

Neither the ESIA or BAP includes a reliable estimate or mapping of households or communities located inside or immediately adjacent to the biodiversity offsets or a baseline (or plans to develop a baseline) of peoples' dependence on ecosystem services in the sanctuaries. Of particular note, the BAP includes a map incorrectly illustrating that there are no communities or human settlements inside the Mahamyaing Sanctuary (the text of the BAP does, however, briefly describe a rough estimate of human residence in the sanctuary). Finally, neither document assesses the applicability of PS5 on Land Acquisition and Involuntary Resettlement or estimates potential costs for mitigating possible economic or physical displacement.

Biodiversity offset-related stakeholder engagement activities with major conservation actors and major conservation-focused government institutions appear to have been robust and to have informed biodiversity offset selection. However, there was limited engagement with land and livelihood-focused stakeholders[26] prior to biodiversity offset selection. IFC staff explained that this was intentional and meant to manage the expectations of people and communities potentially affected by the biodiversity offsets.

As stated in BBOP Principle 6, "in the context of biodiversity offsets, among the most important stakeholders are often groups who hold rights over land and resources that might be affected (such as indigenous peoples and local communities) as well as institutions and organizations with authority for biodiversity planning and expertise in conservation."[27] As of April 2019, there is no publicly disclosed stakeholder engagement plan for the project (including the biodiversity offsets) and broad community support has not been publicly documented.

The populations affected by the two project sites were assessed based on the criteria to trigger PS7 on Indigenous Peoples and were determined to have not met these criteria. Stakeholder engagement just prior to board approval raised doubts regarding this determination. The IFC Environmental and Social Review Summary (ESRS) was updated in the month after board approval and states that "the company will engage a qualified anthropological/ethnographic expert (preferably knowledgeable about the Myanmar context) to conduct a study which further determines whether ethnic minority groups in the project footprint areas possess the characteristics defining [indigenous peoples] as per PS7 inclusive of whether the [indigenous

[24] See: USAID. 2017. Country Profile: Land Tenure and Property Rights, Burma. https://www.land-links.org/country-profile/burma/

[25] The 2012 Vacant, Fallow, and Virgin Land Act enables government to acquire and redistribute lands the government classifies as vacant, fallow, or virgin. Numerous observers have raised concerns about land-grabbing related to implementation of the Act.

[26] See 2017 analysis of land stakeholders in Myanmar – USAID. May 2017. "Land Stakeholder Analysis: Governance Structures and Actors in Burma." Tenure and Global Climate Change (TGCC) Program. https://www.land-links.org/document/tgcc-land-stakeholder-analysis-governance-structures-actors-burma/

[27] Business and Biodiversity Offsets Programme (BBOP). 2012. Guidance Notes to the Standard on Biodiversity Offsets. BBOP, Washington, D.C. p. 69 http://bbop.forest-trends.org/guidelines/Standard_Guidance_Notes.pdf

peoples] are more vulnerable to project impacts than non-[indigenous peoples] groups."[28] This assessment has not yet occurred.

Most pertinent to this report, the populations affected by the biodiversity offsets were not included in the original assessment or in the commitment to conduct a second assessment regarding the applicability of PS7. While there is significant overlap in the ethnic groups affected by the project and offset sites, there are some differences. For example, the entire Panlaung Pyadalin Sanctuary lies within the Constitutionally-recognized Danu Self-Administered Zone of the ethnic minority Danu people. While the differences in populations may not be determined to be significant with regard to the applicability of PS7, it is important enough to be considered in the follow-up formal assessment to which the company committed, as documented in the ESRS.

Although neither scoping nor more robust assessments of socio-economic issues informed the selection of the biodiversity offset sites or the December 2018 BAP, there is still an opportunity to identify, avoid, minimize and mitigate potential socio-economic impacts, if such actions are prioritized and properly budgeted. GoM and other actors have and continue to conduct relevant socio-economic assessments. For example, the Forest Department, in cooperation with a Myanmar NGO are identifying and geo-locating households inside the proposed boundaries of Mahamyaing. This is part of the larger governmental process to formally gazette Mahamyaing Sanctuary. There appears to be a good opportunity to collaborate with and to supplement existing or ongoing assessments to ensure that such assessments are consistent with IFC Performance Standards.

IFC staff explained that social considerations in offset design are an active area of discussion within IFC and among external practitioners. IFC staff also stated that the assessment of social issues for the offsets associated with the STG Cement Project is among the most advanced of any IFC offset and exceed most external project practices. IFC acknowledged that there was room for improvement in this project. Specifically, IFC explained that the client and the implementing NGO will be asked to explore pragmatic solutions to manage stakeholder expectations within and near the offset areas, and to assess how stakeholder interests can be aligned and/or addressed, especially for those stakeholders that may be directly impacted by the offset program.

Recommendations:

a. The project should collaborate with the Forest Department and/or other GoM agencies to supplement ongoing social and economic assessments that are relevant to this project area; ensure the assessments meet the requirements of all relevant IFC Performance Standards; and include people potentially affected by the biodiversity

[28] See: https://disclosures.ifc.org/#/projectDetail/ESRS/38831. The findings of the assessment to determine applicability of PS7 are described in the Environmental and Social Review Summary (ESRS) on the IFC website, but the full analysis is not included in the April 2017 ESIA or any other public documentation.

offsets. Results from the assessments should be used to accurately target and budget for conservation and livelihood restoration activities.

b. The project should establish a participatory process for determining appropriate restrictions on land use in the biodiversity offsets and estimate costs for mitigating adverse impacts to livelihoods from biodiversity-offset restrictions. Publicly disclose English and local language translations of a biodiversity offset-related stakeholder engagement plan as part of the larger project stakeholder engagement plan.
c. IFC should proactively reinforce to GoM that any physical or economic displacement of people in the biodiversity offsets must be conducted in a manner consistent with IFC Performance Standards, even if such displacement is induced by non-project-related GoM actions (e.g., implementation of the Vacant, Fallow, and Virgin Lands Act).
d. The project should expand the planned follow-up analyses of the applicability of IFC's Performance Standard on Indigenous Peoples to include people adversely affected by the biodiversity offsets. Publicly disclose the complete set of analyses.
e. The project should employ a social specialist with regional expertise to conduct the above activities. If economic and/or physical displacement risks are potentially significant, employ a resettlement specialist with regional expertise. IFC should closely monitor the work of these specialists.
f. The project should modify the Biodiversity Offset Management Plan to include the above-recommended actions, including appropriate supplemental financial resources. The scope of work for the NGO service provider should enable the latitude required to assess and address social and other emergent challenges.

<u>Finding 6</u>: Achieving the additional conservation outcomes required of the biodiversity offsets is dependent on STG, GoM and partner commitments to coordinate roles, responsibilities, and financial resources; however, these roles, responsibilities, and financial resources are not yet formally defined.

'Additionality' requires that biodiversity offsets achieve conservation outcomes above and beyond results that would have occurred if the offset had not taken place. Further, conservation outcomes of biodiversity offsets must be measurable.

Protected areas in Myanmar, including the two proposed as biodiversity offsets, are largely underfunded and their biodiversity values are under threat from various legal and illegal activities in and around protected areas. These factors are part of a credible justification for supporting existing wildlife sanctuaries as biodiversity offsets which can provide additional conservation outcomes.

The conservation baselines for the Panlaung Pyadalin and Mahamyaing Sanctuaries, however, are dynamic. Fundamental to measuring additional conservation outcomes is documenting what would happen in the absence of the offsets. While current conservation actions and financing for the sanctuaries are insufficient, relevant GoM agencies and non-governmental conservation organizations have and continue to play significant roles in and around the sanctuaries with

committed financial resources. Further, threats to biodiversity from both within and outside the sanctuaries are increasing (see Finding 3).

Some of the roles, responsibilities and capacities of relevant GoM agencies are briefly described in the BAP. There is no description in the BAP of committed financial resources by government or conservation NGOs. These general descriptions are not sufficient to serve as a counter factual against which conservation outcomes can be measured. Further, major activities and plans are not captured in these descriptions such as the Nature and Wildlife Conservation Department's plans to expand the Panlaung Pyadalin Sanctuary to the northeast and the Forest Department's and a Myanmar NGO's ongoing assessments of human residence and resource use in and around Mahamyaing Sanctuary. Accounting for these and other activities and plans is necessary to develop a "without-offset" biodiversity baseline.

Clarifying roles, responsibilities and financial resources is not only important to measure additionality, it is critical to ensure conservation success. The Panlaung Pyadalin and Mahamyaing Sanctuaries – given their size, habitat types, known species, and proximity to the project sites – would be likely to achieve the required conservation outcomes if protected with complete efficiency. However, as the protected areas will continue to be under threat from human encroachment, hunting, and logging, 100 percent protection cannot be assumed. Further, because the sanctuaries exceed STG's calculated offset requirements (in terms of size) and STG is not funding the complete operating costs of the sanctuaries, achieving the required conservation outcomes is dependent on GoM, and possibly other conservation actors, making and fulfilling long-term legal and financial commitments.

The project recently made symbolic progress toward clarifying roles, responsibilities and financial resources. Specifically, in early December 2018, STG signed a letter of intent with the Forest Department to cooperate on the implementation of the Biodiversity Offset Management Plan. Both parties also agreed to cooperate on developing a more detailed letter of agreement.

Recommendations:

a. The project should assess and document the likely trajectory of biodiversity conservation both with, and without, the measures planned for the offsets in order to establish a without-offset baseline against which additional conservation outcomes can be measured. Urge GoM to strive to meet best regional practice conservation efforts on estimations of budgetary and human resources. India and Thailand, for example, have considerable experience in this area.
b. Current and planned roles, responsibilities, and committed financial resources of STG, GoM, and conservation actors documented in the without-offset baseline assessment should inform negotiations regarding a legally-binding and long-term agreement between STG and GoM.

Annex 1- United States Position, IFC Proposed Financing of the STG Cement Project in Myanmar, July 31, 2017.

The United States wishes to thank IFC staff for the time they spent answering many questions on this project. Myanmar is at a critical stage of its economic and political development. The United States recognizes that the IFC has an important role to play to catalyze private sector investment in the country, and it strongly supports IFC engagement in Myanmar.

The United States also recognizes that this project offers both financial and development additionality. However, the United States has significant concerns about the environmental due diligence, which U.S. subject matter experts assessed especially carefully in light of the unique characteristics of the ecosystem where the STG cement plant and its limestone quarry and coal mine are located and the prevalence of wildlife trafficking and illegal logging in the area. Because of the unique biodiversity of these surroundings, this statement focuses primarily on biodiversity risks of this project, but this was only one of several factors.

The United States' review of the environmental and social impact assessment report and supporting documents revealed gaps in baseline data for rare and endangered species as well as insufficient analysis and mitigation plans to address environmental impacts. In addition, the United States believes the plans for addressing impacts to critical and natural habitats (e.g., the biodiversity action plan) should have been more robustly developed. The risks associated with the use of offsets to mitigate impacts to critical habitat are high and require a commensurately high level of data quality, analysis, planning, and commitment. In light of capacity constraints, the project should have included designated financing and assistance to improve technical capacity and governance in the relevant government institutions. Absent this, the United States is not confident that the project ensures against a net loss, or ideally allows for net gains for biodiversity. In addition, the United States believes the project should have included emissions data for the coal mine and additional air quality data, without which it will be impossible to effectively assess the project's impact.

For these reasons, consistent with provisions of U.S. law pertaining to the review of Multilateral Development Bank proposals, the United States requests to be recorded as voting no on the project proposal.

The United States would also like to reiterate its support for the economic and political reforms in Myanmar, as well as its demonstrated commitment to environmentally sustainable development. The U.S. position on this project is a reflection of the importance it places on adequate data collection and project preparation in advance of presentation of proposals for IFC Board consideration in all countries. The U.S. commitment to Myanmar's development, both through bilateral assistance and engagement with multilateral resources like the IFC, remains steadfast.

Annex 2 - Excerpts of U.S. comments and positions on IFC and World Bank safeguard policies relevant to biodiversity offsets

The U.S. submitted and publicly disclosed numerous comments on various drafts of the World Bank's Environmental and Social Framework, including Environmental and Social Standard 6 (ESS6) on Biodiversity Conservation and Sustainable Management of Living Natural Resources. Below are excerpts of U.S. comments specific to biodiversity offsets. These comments and concerns, in addition to U.S. comments directed to the IFC as part of the 2010-2011 review of their Sustainability Framework (see page 15 of this report) form part of the justification for selecting the IFC STG Cement Project for review and for focusing the review on the use of biodiversity offsets for impacts to critical habitat.

April 2014 - [The U.S.] position remains...consistent with when we discussed the adoption of the IFC Sustainability Framework, that offsets should not be allowed for impacts in critical habitats.

March 2015 - [The U.S.] recommend[s] a prohibition on offsets for impacts on critical habitat. The effective implementation of biodiversity offsets is extremely challenging, even in countries with extremely high capacity. Given the potentially catastrophic impacts on endangered species, we believe the risks are simply too high...

August 2016 - In ESS6, habitat, biodiversity and sustainable management of living natural resources are addressed in a more integrated manner than previously, but the United States remains concerned about the use of biodiversity offsets. Critical habitats occur over a small portion of the planet, but their global benefits far outweigh their size. Many critical habitats are complex ecosystems that are not fully understood from an ecological perspective, and the science behind offsets is still evolving. Biodiversity offsets are challenging to design, implement, monitor, and sustain over the long-term, even under the best of circumstances. For all these reasons, biodiversity offsets should be used to compensate for adverse impacts on critical habitats in rare cases and only as a last resort when: (i) all other technically feasible avoidance, minimization and restoration measures have been considered; (ii) they are supported by rigorous, sound science; and (iii) long-term management and funding is secure.

Annex 3 – IFC response to USAID report, April 19, 2019

IFC appreciates the time and effort the USAID team have invested to understand IFC's engagement with Shwe Taung Cement Limited ('the company' or 'STC'), and, specifically, the Biodiversity Action Plan ('BAP') and implementation thereof. Further, we thank USAID for their findings and associated recommendations. To the extent that these are aligned with IFC's position, we recognize they will further enhance successful execution of the BAP, the first of its kind in Myanmar.

Since IFC's investment in STC we have monitored our investment and, in this context, have provided assistance to the company to support their alignment with IFC's requirements. Key focus areas include corporate governance, transfer of sectoral knowledge and environmental and social management. The latter includes ongoing engagement with the company on their implementation of the BAP. Since IFC's involvement with the project, the company has made substantive progress in improving performance in all areas, notably in relation to environmental and social issues.

The challenges involved in offsetting the biodiversity impacts are well recognized. However, the company is fully committed to aligning with the Performance Standards and, at this time, we are of the view that the objectives of the BAP will be achieved by the company. Doing so will not only ensure the biodiversity impacts of the project are successfully offset, it will also set an important benchmark for other developments in Myanmar.

Thus, we remain positive that our partnership with the company, and with the support of organizations such as USAID and the Government of Myanmar, will not only facilitate best practice by the company, but also act as a catalyst to promote sustainable development in-country allied to demonstrating how biodiversity impacts can be adequately managed.